

What Is Claimed Is:

1. An asymmetric Fabry-Perot modulator,  
comprising:

a first reflector and a second reflector in said  
asymmetric Fabry-Perot modulator forming a resonant  
cavity therebetween;

electro-absorption material disposed between said  
first reflector and said second reflector, the  
absorption of said electro-absorption material being  
varied in response to an external modulating signal;  
and

means for adjusting the length of said resonant  
cavity formed between said first reflector and said  
second reflector, said cavity length adjustment means  
include changing the position of said first reflector  
relative to said second reflector, wherein the  
magnitude of light output from said first reflector is  
determined by the reflectivity of said first reflector,  
the reflectivity of said second reflector, the  
absorption in said electro-absorption material and the  
length of said resonant cavity as defined by said  
cavity length adjustment means.

2. A method for tuning an asymmetric Fabry-Perot modulator, comprising:

reflecting laser light between a first reflector and a second reflector in said asymmetric Fabry-Perot modulator, said first reflector and said second reflector forming a resonating cavity therebetween;

positioning said first reflector to change the length of said resonating cavity to an optimal wavelength as defined by the properties of electro-absorption material contained in said modulator; and

monitoring the output of said first reflector as the length of said resonating cavity is tuned whereby to tune said asymmetric Fabry-Perot modulator to the optimal wavelength.

3. A method for tuning an asymmetric Fabry-Perot modulator, comprising:

reflecting laser light between a first reflector and a second reflector in said asymmetric Fabry-Perot modulator, said first reflector and said second reflector forming a resonating cavity therebetween;

applying an external modulating signal to electro-absorption material disposed between said first reflector and said second reflector, the absorption of said electro-absorption material being varied in response to said external modulating signal; and

adjusting the length of said resonant cavity formed between said first reflector and said second reflector, wherein the magnitude of light output from said first reflector is determined by the reflectivity of said first reflector, the reflectivity of said second reflector, the absorption of said electro-absorption material and the length of said resonant cavity as defined by said cavity length adjustment means.

4. The method of claim 3 further comprising the method step of monitoring the magnitude of said light output from said first reflector.

5. The method of claim 4 further comprising the method step of adjusting the length of said resonant cavity based upon said monitored light output to tune

said asymmetric Fabry-Perot modulator to an optimal wavelength.

6. A method for tuning a laser, comprising:  
providing an asymmetric Fabry-Perot modulator,  
said modulator comprising:

a first reflector and a second reflector in  
said asymmetric Fabry-Perot modulator forming a  
resonant cavity therebetween;

electro-absorption material disposed between  
said first reflector and said second reflector, the  
absorption of said electro-absorption material being  
varied in response to an external modulating signal;  
and

means for adjusting the length of said  
resonant cavity formed between said first reflector and  
said second reflector, said cavity length adjustment  
means include changing the position of said first  
reflector relative to said second reflector, wherein  
the magnitude of light output from said first reflector  
is determined by the reflectivity of said first  
reflector, the reflectivity of said second reflector,  
the absorption in said electro-absorption material and

the length of said resonant cavity as defined by said cavity length adjustment means;

applying said external modulating signal to said electro-absorption material;

monitoring said magnitude of light output from said first reflector; and

adjusting the length of said resonant cavity based upon said monitored light output to tune said asymmetric Fabry-Perot modulator to an optimal wavelength.

7. The method of claim 6 wherein said external modulating signal is a voltage.

8. The method of claim 7 wherein said voltage is constant.

9. The method of claim 7 wherein said voltage is varied over a period of time.